

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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PR File No. 94-SP1

PR 94-103

In the Matter of)
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)
Petition of the Public Utilities)
Commission, State of Hawaii, for)
Authority to Extend Its Rate)
Regulation of Commercial Mobile)
Radio Services in the State of)
Hawaii)

To: The Commission

OPPOSITION OF McCaw Cellular Communications, Inc.

Of Counsel:

Howard J. Symons
James A. Kirkland
Cherie R. Kiser
Kecia Boney
Tara M. Corvo
Mintz, Levin, Cohn, Ferris,
Glovsky and Popeo, P.C.
Suite 900
701 Pennsylvania Ave., N.W.
Washington, D.C. 20004
(202) 434-7300

Scott K. Morris
Vice President of External Affairs
McCaw Cellular Communications, Inc.
5400 Carillon Point
Kirkland, Washington 98033
(206) 828-8420

September 19, 1994

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OPPOSITION OF McCaw Cellular Communications, Inc.

McCaw Cellular Communications, Inc. ("McCaw"),^{1/} by its attorneys, hereby submits its opposition to the above-captioned petition ("Petition") filed by the Public Utilities Commission of the State of Hawaii ("HAPUC").

INTRODUCTION AND SUMMARY

In the Second Report and Order,^{2/} the Commission established a sound regulatory foundation for the continued growth and development of commercial mobile radio services ("CMRS"). The Commission correctly concluded in that proceeding that existing market conditions, together with enforcement of other provisions of Title II, render tariffing and rate regulation unnecessary to ensure that CMRS prices are just and nondiscriminatory or to protect

^{1/} McCaw provides cellular service to more than 2.5 million subscribers in 24 states, including Hawaii.

^{2/} In the Matter of Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, Second Report and Order, 9 FCC Rcd. 1411 (1994) ("Second Report and Order").

consumers. The Commission found that imposing these requirements on cellular and other CMRS providers would not serve the public interest, and that forbearance from unnecessary regulation of CMRS providers would enhance competition in the mobile services market.^{3/} Evaluated against these principles, the above-captioned petition must be denied.

First, Congress preempted state rate and entry regulation because it recognized that a patchwork of inconsistent state rules would undermine the growth and development of mobile services, which, by their nature, operate without regard to state boundaries.^{4/} While the statute provides a process for a state to request rate regulatory authority, it precludes the reinstatement of entry barriers and sanctions the exercise of that authority only in extreme cases: when significant market failure justifies substituting regulation for the operation of market forces.^{5/} The Commission recognized that state regulation could become a burden to the development of the wireless infrastructure -- and could impede the statutory mandate for regulatory parity. Consistent with the intent of Congress, the Commission established "substantial hurdles" that a state must clear in order to justify rate regulation of CMRS providers.

Second, the HAPUC has utterly failed to make the substantial showing required to justify the authority it seeks in the above-captioned proceeding. To the contrary, it seeks to extend its

^{3/} Id. at 1467.

^{4/} See H.R. Rep. No. 213, 103d Cong., 1st Sess. 494 (1993) ("Conference Report"); H.R. Rep. No. 111, 103d Cong., 1st Sess. 260 (1993) ("House Report").

^{5/} 47 U.S.C. § 332(c)(3). See also House Report at 261-62 (in reviewing petitions filed by the states, "the Commission also should be mindful of the Committee's desire to give the policies embodied [sic] in Section 332(c) an adequate opportunity to yield the benefits of increased competition and subscriber choice anticipated by the Committee"). In this regard, the Commission should confirm the plain intent of Section 332(c) and preempt state regulation concerning all services offered by a commercial mobile service provider, including enhanced services as well as basic communications services.

current rate regulation solely because it is "uncertain" whether initially-approved CMRS rates are just and reasonable. The Commission has already determined that the level of competition in the CMRS marketplace is sufficient to support broad forbearance from rate regulation. The HAPUC has provided no evidence that the level of competition in Hawaii departs significantly from the market conditions relied upon by the Commission, nor has it demonstrated that cellular carriers in Hawaii have exercised market power.

The scanty economic analysis put forward to support Hawaii's claim for regulatory authority is fundamentally flawed. The HAPUC erroneously relies on an "increase in profits" to conclude that rates may be unreasonable. It ignores the fact that cellular carriers will soon face competition from so-called enhanced specialized mobile radio systems ("ESMRs") and from licensees using the 120 MHz of spectrum recently made available for PCS. Even if the CMRS marketplace in Hawaii is not perfectly competitive, the Commission itself has acknowledged that perfect competition is not a necessary prerequisite for forbearance.

Third, the HAPUC fails to demonstrate that consumers would benefit from regulation. Price controls limit the ability of regulated firms to respond to changes in technology and in cost and demand conditions. Rate regulation also deters new investments, improvements in service quality, and new entrants in the marketplace. To the extent that the HAPUC would impose rate regulation solely on cellular operators, moreover, it would reestablish the very regulatory disparities that last year's comprehensive amendment of Section 332(c) of the Communications Act was intended to correct.

The public interest is better served by the regulatory forbearance embodied in the Second Report and Order and the introduction of additional competition through the allocation of new

spectrum for CMRS, and Congress intended for these policies to be given "adequate opportunity to yield the [anticipated] benefits of increased competition and subscriber choice" before state rate regulation was imposed on CMRS providers.^{6/} Given the acknowledged harms from such regulation and the HAPUC's failure to demonstrate the need to impose price controls on cellular carriers, the Petition should be denied.^{7/}

I. SECTION 332(C) AND THE COMMISSION'S RULES IMPOSE AN EXTREMELY DEMANDING STANDARD FOR THE AUTHORIZATION OF STATE REGULATION OF CELLULAR SERVICES

The Second Report and Order sets forth the Commission's general analysis with respect to the level of competition in cellular markets, and makes fundamental policy choices with respect to appropriate regulation. These fundamental policy decisions, as well as the framework established by Section 332(c), dictate that the grant of state petitions to permit entry, rate or tariff regulation should be very much the exception rather than the rule.

The Commission has found the CMRS market (including the provision of cellular service) sufficiently competitive to justify forbearance from rate and tariff regulation.^{8/} Inasmuch as the Commission did not insist on perfect competition as a prerequisite for deregulation, the "substantial hurdle"^{9/} that must be met by a state's request for authority to regulate cellular

^{6/} House Report at 261.

^{7/} It is important to bear in mind that denial of the petition does not foreclose state regulatory authorities from returning to the Commission at a later date should evidence appear that consumers are indeed being injured because rate regulation is not being exercised at the state level. Thus, the burden of proof is properly placed on the petitioning state to show why free market forces should not be given a chance to operate now.

^{8/} Second Report and Order at 1472, 1478-79.

^{9/} Id. at 1421.

services cannot be satisfied with mere assertions of less than fully competitive conditions or speculation on the possible need for regulation. Rather, the Second Report and Order suggests a three-part test, with each state required to meet its burden of proof on each part of the test.

First, to support a petition for rate authority, the petitioning state must show that market conditions unique to that state are substantially less competitive and substantially more likely to cause harm to consumers than the market conditions that have been found generally to support the Commission's decision to forbear from rate and tariff regulation.

Second, since the Commission expressly relied upon the continuing applicability of Section 201 and 202's requirements for just, reasonable, and not unreasonably discriminatory rates, and the availability of the complaint procedure under section 208 to address any residual competitive problems,^{10/} a state must demonstrate that whatever unique competitive problems it has identified cannot be adequately addressed through these Federal remedies.

Finally, in the unlikely event that a state can satisfy the factors described above, it must also show that any residual risks to consumers, i.e. the marginal benefits of the proposed state regulation, outweigh the substantial costs associated with regulation. The Commission generally found the costs of regulation to be substantial,^{11/} and sought to "avoid the imposition of unwarranted costs or other burdens upon carriers because consumers in the national economy ultimately benefit from such a course."^{12/}

^{10/} Id. at 1478-79.

^{11/} Id.

^{12/} Id. at 1419.

Approval of a state petition that fails to meet this test would contravene the statutory framework, resulting in the imposition of rate regulation under circumstances in which the Commission itself has found such regulation to be unnecessary and counterproductive.

Hawaii's Petition fails to make any of the evidentiary showings required to justify its existing system of rate regulation or its proposed scheme for commercial mobile radio services. As a result, its Petition must be denied and any extension of its existing rate regulations preempted.

II. HAWAII HAS FAILED TO CLEAR THE SUBSTANTIAL HURDLE ESTABLISHED FOR EXISTING AND PROPOSED RATE REGULATION

The HAPUC seeks "to ensure that customers of the CMRS utilities receive adequate and efficient services at reasonable and fair rates" and "to provide a fair return to the regulated CMRS utilities,"^{13/} but demonstrates no evidence of conditions warranting rate regulation other than its unsupported speculation. The HAPUC also fails to show any benefits from its past regulation of cellular carriers, and its petition ignores the substantial costs that rate regulation imposes upon service providers and the public. It also ignores the continuing availability of Federal remedies to prevent discriminatory pricing.

By contrast, there is evidence of sufficient competitive behavior and consumer benefits in the CMRS marketplace to justify the preemption of economic regulation by the HAPUC. The increasing competition in the CMRS marketplace further supports preemption of state rate

^{13/} Petition at 3.

regulation.^{14/} Regulation can be justified only if there is evidence of market power or a likelihood that such power will be exercised in the future. There is no evidence that the CMRS marketplace in Hawaii suffers from either defect.

The HAPUC Petition is devoted to presenting facts regarding why the mobile service rates it once approved may not be currently just and reasonable. It points to financial reports filed by cellular carriers as evidence that the carriers are "beginning to experience either an increase in profits and a recovery of their prior accumulated losses or potential profits for the future."^{15/} The Petition asserts that revenues in recent years have increased proportionately more than the incremental increase in operating costs and plant or equipment investments, and predicts that the rate of return in cellular service will become greater as more customers subscribe.^{16/} Based on this "evidence," the HAPUC concludes that it is "uncertain" if the original rates are still accurate.

Mere "uncertainty" about the justness and reasonableness of rates obviously falls far short of proof that state regulations are necessary to ensure that rates are just and reasonable. Even the "evidence" upon which this "uncertainty" rests, however, is meaningless. Rates of return prove nothing about the presence or absence of competition in a market.^{17/} To the extent that

^{14/} See Declaration of Bruce M. Owen, President, Economists Incorporated ("Owen Declaration"), attached hereto as Exhibit A. At McCaw's request, Economists Incorporated undertook an economic analysis of the need for and potential effects of state rate regulation of CMRS providers. The Owen Declaration establishes that there is no justification for imposing rate regulation on CMRS providers.

^{15/} Petition at 3.

^{16/} Id. at 4.

^{17/} Owen Declaration at ¶¶ 41-42.

Hawaii is concerned with future conditions in the CMRS marketplace, additional competition from new entrants is imminent.^{18/} Even if entry by competing suppliers of mobile communications services were not imminent, Hawaii has not shown that an increased subscriber base will produce higher, much less unreasonably high, rates of return in the future.^{19/}

HAPUC also suggests that rate regulation is necessary to permit it to "test . . . market driven rates against the cost of service and the rate of return on rate base to determine whether the current rates and tariffs are excessive. . ."^{20/} This argument stands Section 332(c) on its head. A showing that rates are unjust or unreasonable is required to satisfy the conditions of the statute. States should not be permitted to retain or impose rate regulation to gather the evidence needed to permit state regulation in the first place.

Similarly, the HAPUC's desire to complete its ongoing communications infrastructure docket, HAPUC Petition at 5, is not a proper foundation for continued rate regulation. Hawaii has been imposing regulations on cellular carriers since 1986, apparently without ever gathering evidence to support the need for such regulation. If, after completing its infrastructure docket, the HAPUC has evidence which satisfies the statutory standard for permitting rate regulation, it can file a petition at that time.

^{18/} Id. at ¶ 7.

^{19/} Id. at ¶ 41.

^{20/} HPUC Petition at 4.

III. SECTION 332(C) DOES NOT PERMIT STATE REGULATION OF MARKET ENTRY

While Hawaii's Petition is generally devoid of any description of its current regulatory regime, it appears that CMRS providers would be required to obtain certificates of public convenience.^{21/} To the extent that the HAPUC seeks authorization to regulate market entry, such a ruling is beyond the power of the Commission to grant.

Section 332(c)(3) states categorically "that no state or local government shall have any authority to regulate the entry of or rates charged by any commercial mobile service provider." 47 U.S.C. § 332(c)(3)(A). Any state regulations to the contrary are preempted. A state may petition for the authority solely to regulate rates.^{22/} The Act does not permit a the filing or granting of a petition for state regulation of market entry.

^{21/} See HPUC Petition at 2 (referring to certification of telecommunications service providers); *id.* at 5 (noting need for tariff regulation "once other companies are licensed by the FCC and certificated by Petitioner to provide commercial mobile radio services...").

^{22/} See 47 U.S.C. §§ 332(c)(3)(A) ("a State may petition the Commission for authority to regulate the rates for any commercial service"), 332(c)(3)(B) (State may petition to be authorized to continue "existing authority over rates") (emphasis supplied).

CONCLUSION

The HAPUC has failed to meet its burden of proof and, thus, the Commission has no basis for allowing the State to continue to regulate rates of CMRS providers, or regulate such rates in the future. Its Petition must be denied.

Respectfully submitted,

MCCAWE CELLULAR COMMUNICATIONS, INC.



Scott K. Morris
Vice President of External Affairs
McCaw Cellular Communications, Inc.
5400 Carillon Point
Kirkland, Washington 98033
(206) 828-8420

Of Counsel:

Howard J. Symons
James A. Kirkland
Cherie R. Kiser
Kecia Boney
Tara M. Corvo
Mintz, Levin, Cohn, Ferris
Glovsky and Popeo, P.C.
Suite 900
701 Pennsylvania Ave., N.W.
Washington, D.C. 20004
202/434-7300

September 19, 1994

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EXHIBIT A

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C.

In the Matter of Implementation
of Sections 3(n) and 332 of the
Communications Act: Regulatory
Treatment of Mobile Services

}

GN Docket No. 93-252

Declaration of Bruce M. Owen on the Hawaii Petition

I. Qualifications

1. I am an economist and president of Economists Incorporated, an economic consulting firm located at 1233 20th Street, N.W., Washington, D.C. 20036. I am also a visiting professor of economics at Stanford University's Washington, D.C. campus. I hold a Ph.D. in economics from Stanford University (1970) and a B.A. in economics from Williams College (1965). My fields of specialization are applied microeconomics and industrial organization, especially antitrust economics and regulation of industry. I have published a number of books and articles in these fields, including "*United States v. AT&T: The Economic Issues*" (with R. Noll, in J. Kwoka and L. White, eds., *The Antitrust Revolution*, Scott, Foresman, 2nd ed., 1994), *Video Economics* (with S. Wildman, Harvard University Press, 1992), and *The Regulation Game* (with R. Braeutigam, Ballinger, 1978). I have taught economics as a full-time member of the faculties of Duke University and Stanford University. From 1979 to 1981 I was the chief economist of the Antitrust Division of the United States Department of Justice. During 1971-1972 I was the chief economist of the White House

Office of Telecommunications Policy. I have testified in a number of antitrust and regulatory proceedings, including ones relating to local exchange, interexchange, and cellular telephony as well as paging. A copy of my curriculum vitae is attached to this declaration.

II. Introduction and Summary

2. I have been asked by counsel for McCaw Cellular Communications, Inc., to provide an economic analysis of the Public Utilities Commission, State of Hawaii, "Petition," *In the Petition of Public Utilities Commission, State of Hawaii, For Authority to Extend Its Rate Regulation of Commercial Mobile Radio Services in the State of Hawaii*, FCC PR File No. 94-SP1, Aug. 8, 1994 (HPUC Petition). This section summarizes my conclusions. Section III examines the arguments made by the Hawaii Public Utilities Commission (HPUC) in support of regulation of commercial mobile radio service (CMRS) providers. Sections IV and V evaluate the effectiveness and costs of regulation, and Section VI considers the implications of authorizing regulation. VII is a conclusion.

3. The Federal Communications Commission (Commission) should not grant the HPUC's petition. The Commission has recently concluded that relevant markets are sufficiently competitive to justify forbearance from regulation of cellular and other CMRS providers (*CMRS Second Report*, 9 FCC Rcd 1411 (1994) at ¶¶135, 145). Nothing in the HPUC petition undermines this conclusion. This is true regardless of which CMRS prices one is considering, for example, wholesale and/or retail prices for access, air time, roaming, or enhanced services.

4. The key question with respect to rate regulation is whether it is likely to be cost-effective in the future world to which it will be applied. It is generally acknowledged that the CMRS market is becoming more competitive as a result of changes in technology and various Commission initiatives that will permit or promote entry. Because the case for regulation cannot be justified based on evidence regarding past and present conditions, clearly there is no basis for continuing or future regulation.

5. *First*, the Commission has already found that "CMRS providers do not have control over bottleneck facilities" (*CMRS Second Report* at ¶237). In the case of cellular carriers this conclusion is clearly correct. For example, new CMRS systems do not need to interconnect with cellular networks (as opposed to the facilities of local exchange carriers (LECs)) in order to enter the mobile communications market successfully.

6. *Second*, no one, including the HPUC, has demonstrated that the presence today of only two cellular providers in each area has resulted in anticompetitive behavior, including supra-competitive pricing.¹ Without such a demonstration, no case can be made for regulation of CMRS prices. The HPUC offered analyses and data that allegedly demonstrate that cellular carriers have been exercising market power. None of them, individually or collectively, demonstrates the exercise of market power. Claims about anticompetitive behavior are based on faulty economic analysis. By contrast, there is evidence of sufficient competitive behavior and benefits to consumers to justify continued forbearance from economic regulation.

7. *Third*, additional CMRS providers will soon offer competitive cellular-like services. As new CMRS providers establish themselves, any possibility that cellular carriers could acquire or exercise market power is eliminated. Entry by new competitors will be facilitated by the rapid growth in demand for and sales of mobile services.

8. *Fourth*, if state regulation of prices of cellular services were in the public interest, the HPUC should be able to demonstrate benefits from past state regulation. If there were benefits, one ought to be able to observe them by comparing states that regulated with states that did not. However, there is no evidence in the HPUC petition or elsewhere that

¹ See my declarations analyzing the petitions of other states in this proceeding, and my declaration submitted in CC Docket 94-54 (In the Matter of Equal Access and Interconnection Obligations Pertaining to CMRS, September 12, 1994).

regulation of cellular service prices in Hawaii or other states has had any beneficial effect in the past.

9. *Fifth*, regulation of CMRS prices imposes substantial costs. Price controls limit the ability of regulated firms to respond to changes in technology and in cost and demand conditions, and deter new investments, quality improvements, introduction of new services, and entry by reducing returns on pro-competitive activities. The distortionary effects of price regulations that limit returns on investments are likely to be greatest in industries such as CMRS that are characterized by rapid growth, technological change, and relatively high risk.

10. Based on my review of the evidence, it is my opinion that there is no empirical basis for believing that there is a problem with market performance that would warrant regulating CMRS pricing. Thus, the Commission's conclusion that the market is sufficiently competitive to justify forbearance from regulation of cellular and other CMRS carriers is correct. State regulation of CMRS pricing would therefore be likely to harm consumers. There is nothing special about the nature of CMRS competition or regulation in Hawaii that would change this conclusion.

III. Market Structure and Performance

A. *Importance of Market Structure and Performance*

11. In order to assess any potential regulation, it is useful to begin by considering the implications of leaving decisions to market forces. This is commonly done in an antitrust context by defining a relevant market and then evaluating market concentration, conditions of entry, and other structural and behavioral evidence relating to the likelihood that suppliers are exercising, or may come to exercise, unilateral or collusive market power. If market power is being exercised or is likely to be exercised in the future, then regulatory interventions may have benefits in preventing or stemming exclusionary or other anticompetitive behavior. Even if such benefits may result, however, they must be weighed against the fact that the regulatory intervention will impose its own costs, distortions, and dis-

incentives. It would be wrong to assume that an imperfect market can be replaced with perfect regulation.

B. *Market Definition*

1. Purpose of Market Definition

12. To analyze competition, it is important to begin with properly defined antitrust markets. A group of products or services and an associated geographic area constitutes an antitrust market if it is the smallest set of products and the smallest area capable in principle of being profitably monopolized. In other words, if one assumed that a hypothetical single firm controlled the supply of all the products in question, and if that firm could increase its profits by raising prices significantly above competitive levels, then an antitrust market has been defined. However, if a price increase by a hypothetical single firm would be unprofitable because consumers would switch in significant numbers to other products, then the market has been defined too narrowly for antitrust analysis.

2. Relevant Product Markets

13. Cellular services may be competitive with certain landline services, such as intra-LATA toll service, pay telephone service, and telemetry service (*Financial Services Report*, May 25, 1994; *Electric Utility Week*, Aug. 29, 1994, at 7). Cellular services would be competitive with additional landline services but for the fact that residential local exchange services are priced below costs. For customers with relatively long local loops, landline service costs are likely to be similar to or greater than cellular service costs. To analyze some policy issues, it is therefore appropriate to define relevant antitrust markets that include both cellular and landline services. Nevertheless, for the purposes of the present declaration I make the conservative assumption that landline services are not in the relevant product market in which cellular and cellular-type services compete.

14. Among the relevant product markets in which cellular services may compete, the one that is now, and is likely to remain, most concentrated

is *mobile telecommunications services*, which I define as the collection of services of the type that cellular and broadband personal communications services (PCS) offer or will offer within the next three to five years. As I will explain further below, at a minimum the participants in this market include cellular providers and broadband PCS providers with at least 20-30 MHz of spectrum. Participants are also likely to include broadband PCS licensees with 10 MHz of spectrum and enhanced specialized mobile radio services (ESMR) providers with 5-10 MHz of spectrum. There may eventually be other participants as well, such as satellite-based services. Also, in some cases consumers are likely to be in a position to substitute landline telephone, paging, and two-way mobile radio services for cellular-type services.

15. The definition of the mobile telecommunications services market used in this declaration is based on the fact that cellular, PCS, and ESMR licensees are all authorized by the Commission to provide the full array of mobile services (Stanley M. Besen and William B. Burnett, "An Antitrust Analysis of the Market for Mobile Telecommunications Services," Charles River Associates, Dec. 1993, at 1 n.1, and at 17-18). It is also based on the conclusion that "all portions of the electromagnetic spectrum that have been allocated to the provision of mobile telecommunications services can be used to provide all of the same services and at about the same cost" (Besen and Burnett at 18).

16. My definition of a relevant antitrust product market for mobile telecommunications services is consistent with the analysis of Besen and Burnett, who define a single relevant antitrust market for all mobile services, including cellular, PCS, and ESMR. In their discussion of the market, Besen and Burnett include services such as paging that require only limited amounts of spectrum. However, in computing concentration in the market, they include only cellular providers, broadband PCS providers (which will have at least 10 MHz of spectrum as a result of Commission licensing), and—in some of their calculations—ESMR providers with 5-10 MHz of spectrum.

17. Cellular systems may also compete in narrower relevant product markets, such as *wireless data transmission services* and *paging services*. However, any such narrower product market that may exist would have more participants and be less concentrated than the market defined for mobile telecommunications services. Because of the additional competitors and scope for entry in a narrower market, insofar as the regulations at issue in the present proceeding are concerned no additional competitive issues are likely to arise in such markets that do not arise in a market for mobile telecommunications services.

3. Relevant Geographic Markets

18. Mobile telecommunications service suppliers compete in providing services in connection with both local and long-distance calls. The precise geographic areas appropriate for analysis of both local and long-distance calls is complicated by the fact that the relevant licensees (cellular A, cellular B, broadband PCS A and B, broadband PCS C-F, and ESMR) serve or will serve different, overlapping areas.

19. In order to define geographic markets in any specific situation, one must determine the extent of feasible geographic price discrimination. To the extent that price discrimination is not feasible, and uniform prices must be charged over a wide geographic area, geographic markets will be broader than if price discrimination is feasible. The broader are geographic markets, the greater will be the number of participants in the markets, and the lower will be concentration. For example, if the geographic market is broader than the Basic Trading Areas (BTAs) used for some of the broadband PCS licenses, the number of broadband PCS competitors in the market will exceed the number of licenses (including Major Trading Area (MTA) licenses) valid in any single BTA. The market share and concentration measures computed below, as well as those presented by Besen and Burnett and others, are likely to be biased upward because they are based on the implicit assumption that cellular licensees in different MSAs and PCS licensees in different BTAs are not in the same

antitrust geographic markets (Besen and Burnett at n. 46 make the same point).

C. Competitors for Cellular in Mobile Telecommunications

1. Broadband Personal Communications Services

20. Digital personal communications services are being licensed in two portions of the radio spectrum. Broadband PCS will be in the 1850-1990 MHz range, while narrowband PCS will be in the 900 MHz range. There will be three 30 MHz broadband licenses and three 10 MHz broadband licenses.

21. There is general agreement that at least the 30 MHz broadband PCS licensees will compete with cellular providers. One observer has predicted that "broadband PCS systems will evolve primarily into cellular competitors. ... [E]conomic factors all suggest that the larger PCS systems, say 30 MHz MTA-wide systems, necessarily must target cellular subscribers ... to become their customers" (*Cellular Business*, March 1994, at 14, 16). According to Commissioner Andrew C. Barrett, "The three 30 MHz allocations, two at the MTA level and one at the BTA level, will provide significant opportunities for new entrants to compete against cellular providers and the emerging Enhanced Specialized Mobile Services market. This new framework achieves one of my policy goals of ensuring that at least three new PCS providers have a real opportunity to offer competitive alternatives to existing cellular players" (TR, June 13, 1994, at 5). A Commission staff report suggests that competitive PCS services can generally be offered with 20 MHz of spectrum (David P. Reed, *Putting It All Together: The Cost Structure of Personal Communications Services*, Federal Communications Commission, Office of Plans and Policy, 1992, at vii-ix). In addition, the Commission has stated that "narrowband PCS services may compete with cellular to some extent" (CMRS Second Report at ¶148).

22. Industry predictions suggest that PCS systems may have advantages over cellular systems, for example, additional service options, superior voice quality, smaller, lighter, cheaper handsets, and perhaps lower costs

(*TR Wireless News*, June 30, 1994). Time Warner Telecommunications has been testing a technology that would make use of existing cable television plant to reduce the cost of deploying PCS services (*Multichannel News*, June 6, 1994, at 2). According to one industry analysis, "Putting all of these factors together, it does seem that PCS has at least a fighting chance to significantly underprice cellular services" (*TR Wireless News*, July 14, 1994).

23. One indication that those in a position to have the best information believe that PCS systems will be significant competitors is the substantial interest in, and the prices that companies are expected to bid for, PCS licenses.

24. Three pioneer preference 30 MHz MTA licenses have been awarded by the Commission. Remaining broadband PCS licenses presumably will be awarded next year. Thirty MHz broadband PCS licensees are required by the Commission to offer service to at least one-third of the population of their market areas within 5 years and two-thirds within 10 years. Ten MHz licensees will be required to cover 25 percent within 5 years or, alternatively, to submit a showing of "equivalent or substantial service" (*TR*, June 13, 1994, at 5).

2. Enhanced Specialized Mobile Radio Services

25. Specialized Mobile Radio (SMR) and ESMR service, like cellular service, uses spectrum in the 800-900 MHz range. The Commission has allocated 19 MHz to SMR/ESMR (*CMRS Second Report* at n. 296). In part because of restrictions imposed by the Commission, SMR has been used primarily for fleet radio-dispatch service. While most SMR systems currently use analog technology, according to a recent study 23 percent of the SMR industry is planning to implement digital technology in the next year. Digital technology will substantially increase capacity and permit firms to offer ESMR service, including integrated voice, messaging, paging, dispatch, and data services (*Land Mobile Radio News*, April 1, 1994; *Communications Week*, June 6, 1994, at 33).

26. Hausman concludes that "ESMR will provide a close substitute to cellular service" (Jerry A. Hausman, "Affidavit," *United States v. Western Electric Co., et al.*, D.D.C., 1992, at 16). Although ESMR may have certain handicaps compared to cellular (*CMRS Second Report* at ¶143), ESMR may offer a wider array of services. According to an industry analyst, many "customers were using SMR and cellular as two separate services, and now Nextel is offering them a package deal. Nextel also offers some advanced messaging capabilities that only a handful of cellular providers have begun to offer" (*Communications Week*, May 30, 1994, p. 31).

27. Nextel, Dial Page, and OneComm have been acquiring SMR systems nationwide and entering into agreements to provide regional, and eventually national, ESMR service (*Communications*, April 1994, at 76, 78). Nextel has agreed to merge with Dial Page and OneComm and to acquire all Motorola's SMR operations. Assuming these transactions close, Nextel's licenses will cover approximately 85 percent of the nation's population in bandwidth slices ranging from 10 to 15 MHz per market (*Multichannel News*, Sept. 5, 1994), and it will have more than 650,000 of the reported 1.5 million SMR subscribers nationwide (*TR*, Aug. 8, 1994, at 39-40; *Mobile Satellite News*, Mar. 2, 1994). Because of the large number of systems under common ownership and the common use of the Motorola Integrated Radio System (MIRS) digital technology, Nextel will have advantages in offering seamless national service (*Land Mobile Radio News*, April 1, 1994). Nextel also has equity shares in Canadian and Mexican SMR providers.

28. An important issue is how long it will take ESMR providers to make their services available as substitutes for cellular service. Motorola has introduced handsets for transmitting voice, data, and fax messages over ESMR. According to press reports, Nextel offers ESMR integrated voice, paging, and two-way radio services in a number of areas and expects to offer these services in several other areas by the end of 1994, when it expects to begin testing switched data services as well. It expects to begin testing packet switched services in 1995. OneComm plans to offer ESMR service in several areas in 1994. Dial Page is aiming to offer service in the

South and Midwest in 1995. It is also reported that the major "MIRS-based ESMR providers have banded together and said they will offer seamless nationwide service as they deploy their networks during the next 2-1/2 years" (*Communications Week*, June 6, 1994).

D. Competitors for Cellular in Wireless Data Transmission

29. Wireless data transmission service will be even less concentrated than cellular-type service because all the providers of cellular-type service will be in the market along with a number of other types of providers.

30. At the local level, cellular providers can offer data services using circuit-switched technology. For example, in Buffalo the non-wireline carrier offers circuit-switched cellular data service for purposes such as remote monitoring (*Communications Daily*, Aug. 3, 1994). Cellular providers are implementing a nationwide network using cellular digital packet data (CDPD) technology. A number of cellular companies have begun using CDPD, including McCaw in Las Vegas and Bell Atlantic Mobile in Baltimore-Washington and Pittsburgh (*Computer Reseller News*, May 23, 1994, at 152; *Financial Services Report*, May 25, 1994). Bell Atlantic has predicted that CDPD will be in the top 60 markets by the end of 1994 (*Advanced Wireless Communications*, May 11, 1994).

31. SMR providers currently can offer wireless data service at the local level. There are also two providers of national wireless data network services, both of which are non-cellular: Ardis, owned by Motorola, and RAM Mobile Data, owned by BellSouth and RAM Broadcasting, have packet switched radio networks in large cities nationwide. In addition, satellite-based services offered by companies such as Qualcomm are used heavily by the trucking industry for purposes such as dispatching, messaging, and tracking vehicle and package locations (*En Route Technology*, July 5, 1994).

32. Non-cellular competitors that are entering wireless data service include Metricom, which has a network operating in the Silicon Valley area and hopes that by the end of 1996 the top 30 U.S. metropolitan sites will

be equipped and running; Nextel and other ESMR providers; and narrow-band PCS providers, such as Mobile Telecommunication Technologies' National Wireless Network, which is slated for roll-out in mid-1995 (*TELECOMREG Digest*, Aug. 8, 1994; *Computer Reseller News*, April 4, 1994, at 55; *Mobile Data Report*, Feb. 28, 1994). PageNet, which has three national paging frequencies, is also able to provide wireless data services (*Newsbytes News Network*, July 25, 1994).

E. *Performance*

33. The HPUC states that it is "uncertain" whether the initial "market-driven" rates that it approved for cellular service are currently just and reasonable. There is no indication in the petition that these rates have increased in nominal, much less real, terms. Nonetheless, the state contends that it needs continued regulatory authority to find out whether rates are just and reasonable. It states that it needs this authority because, after initial years of heavy losses, cellular carriers have become profitable, and because it predicts that rates of return will increase as more customers subscribe (HPUC Petition at 3-4). In this section, I examine the evidence offered by the HUAC and find that none of it, individually or collectively, demonstrates the exercise of market power. Most of the claims about anticompetitive behavior are based on faulty economic analysis. By contrast, there is evidence of competitive behavior, and cellular customers have been benefiting from increasing service at declining real prices.

1. Pricing

34. The real prices of cellular service, adjusted for inflation, declined during each portion of the past decade for which I am aware of systematic studies. Besen *et al.* (at 2) report that on average in the ten largest cellular service areas real prices for access and 250 minutes per month of prime time use declined by 38 percent during 1983-1991. Another study reports that on average real prices for 150 minutes of air time per month declined by 27 percent or more during 1985-91 in the top 30 cellular markets (U.S. General Accounting Office, *Telecommunications: Concerns*